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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,689	12/03/2001	Hiroaki Asuma	501.40910X00	6641

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EXAMINER

NGUYEN, CHANH DUY

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 08/11/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,689

Applicant(s)

ASUMA ET AL.

Examiner

Chanh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5_8.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on May 19, 2004 has been entered and considered by examiner.

Election/Restrictions

2. Applicant's election with traverse of the invention I elected in the reply filed on May 19, 2004 is acknowledged. The traversal is on the ground(s) that "examiner failed to show distinctness or separated utility in the manner required. In this regard, applicants note both inventions II and III recites a dynamic memory". This is not found persuasive because both inventions II and III recites a dynamic memory, but invention I (claims 1-5) does not recite any dynamic memory as applicant's argument. Furthermore, the distinction between invention II and invention III is that invention II does not recite backlight control which show separate status in the art because of their different classification, search and their recognized divergent subject matter.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

3. The references listed on the information Disclosure Statement field on February 03, 2004 and May 03, 2004 have been considered by examiner; see attached PTO-1449.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negishi et al (U.S. Patent No. 5,907,314) in view of Yamazaki et al (U.S. Patent No. 6,590,562 B1).

As to claim 10, Negishi discloses a display device as recited in claim 10 with exception of describing the limitation "the scanning signal lines are supplied to the gate lines sequentially in the direction moving away from respective gate signal at the

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boundary of one display region and the other display region". For example, Negishi teaches gate signal lines (X1-Xn) which are extended in the x direction and are arranged in parallel in the y direction, scanning signal driving circuits (115, 116) which supply scanning signals to respective gate signal lines (X1-Xn). Negishi clearly teaches the arrangement of gate lines and scan driving circuits in Figure 11 is same as applicant's disclosed device in Figures 1 and 11. Negishi teaches drain signal lines (Y1-Yn) which are extended in the y direction and are arranged in parallel in the x direction, and video signal driving circuits (112-113) which supply video signals to respective drain signal lines (Y1-Yn) are formed on one surface of an insulating substrate (e.g., glass substrate 103).

Negishi teaches the display device (101) including a thin film transistor (105a) which is driven by the scanning signals from one side of the gate signal line and a pixel electrode to which the video signals from one side drain of the signal line are supplied through this thin film transistor in each pixel region which is surrounded by the respective signal lines. Negishi teaches the display region (102) which is a collection of the pixel regions is divided into two separate display regions (upper half of liquid crystal panel 102 and lower half of liquid crystal panel 102) using an imaginary line extending along the x direction as a boundary (see Figure 11).

Negishi teaches the scanning signal driving circuit (115) which supplies the scanning signals to respective gate signal lines in one display region (e.g., upper half of the liquid crystal) and the scanning signal driving circuit (116) which supplies the scanning signals to respective gate signal lines in the other display region (e.g., lower

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half of the liquid crystal) being separately formed. Negishi teaches the drain signal lines at one display region side are separated from the drain signal lines at the other display region (see Figure 11). Negishi teaches the video signal driving circuit (115-116) which supplies the video signals to respective drain signal lines in one display region and the video signal driving circuit which supplies the video signals to respective drain signal lines in the other display region are separately formed (see Figure 11). The only difference the reference of Negishi and the claimed invention is that Negishi does not mention the scanning signal lines are supplied to the gate lines sequentially in the direction moving away from respective gate signal at the boundary of one display region and the other display region. Yamazaki teaches the scanning signal lines are supplied to the gate lines sequentially in the direction moving away from respective gate signal at the boundary of one display region and the other display region (see figure 9A). Yamazaki clearly teaches the video signals being supplied from the video signal driving circuit in synchronism with the supply of the scanning (see 2, lines 7-15). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used scanning moving away from boundary of one display region and the other display region as taught by Yamazaki to the scanning circuit of Negishi so that a high speed, large area display with high information content can be easily accomplished at low cost (see column 3, lines 40-49 of Yamazaki).

As to claim 11, this claim recites the limitation similar to claim 10. Thus, it is analyzed as previously discussed with respect to claim 11 above.

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8. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negishi in view of Yashuda et al (U.S. Patent No. 4,842,371).

As to claim 1, note the discussion of Negishi above, claim 1 differs from claim 10 only in that the limitation "intervening insulation film" is recited in claim 1 instead of the limitation "scanning signal ... moving away at the boundary of one display region and the other display region" as recited in claim 10. Thus, Negishi teaches the display device as recited in claim 1 as previously discussed with respect to claim 10 above with exception of describing the limitation "insulating intervening film". Yasuda teaches at least one insulating film (420) place between the gate lines and the drain signal lines (see column 19, line 46 through column 20, line 19). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used insulating film as taught by Yasuda to the display panel of Negishi so as to avoid line defect would occur between gate lines and drain signal lines (see column 20, lines 47-50 of Yashuda).

As to claim 2, it is clear that Negishi teaches the display device being provided with power supply changeover means which drives the scanning signal driving circuit and the video signal driving circuit at one display region side and the scanning signal driving circuit and the video signal driving circuit at the other display region side together or drives the scanning signal driving circuit and the video signal driving circuit at only one of both display regions as recited in the claim.

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9. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negishi in view of Yasuda as applied to claim1 above, and further in view of Yamazaki.

As to claims 4-5, note the discussion of Negishi and Yasuda above. Both do not mention the limitation the scanning signal lines being supplied to the gate lines sequentially in the direction moving away from respective gate signal at the boundary of one display region and the other display region. Yamazaki teaches the scanning signal lines are supplied to the gate lines sequentially in the direction moving away from respective gate signal at the boundary of one display region and the other display region (see figure 9A). Yamazaki clearly teaches the video signals being supplied from the video signal driving circuit in synchronism with the supply of the scanning (see 2, lines 7-15). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used scanning moving away from boundary of on display region and the other display region as taught by Yamazaki to the scanning circuit of Negishi as modified by Yasuda so that a high speed, large area display with high information content can be easily accomplished at low cost (see column 3, lines 40-49 of Yamazaki).

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306


Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



C. Nguyen
August 8, 2004


CHANH NGUYEN
PRIMARY EXAMINER